Listing of Claims:

No amendments to the claims have been made at this time. This listing of claims is provided for convenience and will replace all prior versions and listings of claims in the application.

1. (previously presented) A method comprising:

determining a resonant frequency of a housing layer of a housing member, the housing layer adapted to support a plurality of rigid damping layers interposed with a plurality of visco-elastic damping layers;

ascertaining a loss factor profile in relation to the resonant frequency for each of a plurality of hypothetical models for the housing structure, each model comprising first, second and third theoretical layers wherein at least one of said theoretical layers comprises multiple damping layers; and

selecting a final characteristic of each of said rigid damping layers and said visco-elastic damping layers in relation to the ascertained loss factor.

2. (previously presented) The method of claim 1, the final characteristic selected during the selecting step comprises a respective thickness for each of the rigid damping layers.

3. (previously presented) The method of claim 2, wherein the final characteristic selected during the selecting step further comprises a respective thickness for the housing layer.

4. (original) The method of claim 1, wherein the housing structure comprises five layers comprising the housing layer, a first visco-elastic damping layer affixed to the housing layer, a first rigid damping layer affixed to the first visco-elastic damping layer, a second visco-elastic damping layer affixed to the first rigid damping layer, and a second rigid damping layer affixed to the second visco-elastic damping layer.

5. (original) The method of claim 4, wherein at least one of said hypothetical models identifies the housing layer as the first theoretical layer, the first visco-elastic damping layer as the second theoretical layer, and the second visco-elastic damping layer and the first and second rigid damping layers as the third theoretical layer.

6. (previously presented) The method of claim 1, wherein each one of said theoretical layers comprising multiple layers is characterized as a composite layer, and wherein the selecting step comprises steps of:

identifying an optimum hypothetical model from the plurality of hypothetical models;

developing a second plurality of hypothetical models for each composite layer of the optimum hypothetical model identified during the identifying step, each of said second plurality of hypothetical models in turn comprising first, second and third theoretical layers;

determining a loss factor profile for each of said second plurality of hypothetical models in relation to the resonant frequency; and

further selecting a final characteristic of each of said rigid damping layers and said visco-elastic damping layers in relation to the loss factor profiles from the determining step.

7. (original) A disc drive having a multi-layer housing structure selected in accordance with the method of claim 1.

8. (withdrawn) A multi-layer housing structure comprising:

a substantially planar housing layer;

a first visco-elastic damping layer contactingly affixed to a portion of the housing layer;

a first rigid damping layer contactingly affixed to the first visco-elastic damping layer;

a second visco-elastic damping layer contactingly affixed to the first rigid damping layer; and

a second rigid damping layer contactingly affixed to the second visco-elastic damping layer, wherein the first and second visco-elastic damping layers and the first and second rigid damping layers form a multi-layer damping structure and share a common areal footprint over a surface of the housing layer, and wherein the housing layer, the first and second visco-elastic damping layers and the first and second rigid damping layers have respective thicknesses selected to attenuate excitation energy transmitted to the planar housing layer by the excitation source.

9. (withdrawn) The multi-layer housing structure of claim 8, wherein the thickness of the first rigid damping layer is different than the thickness of the second rigid damping layer.

10. (withdrawn) The multi-layer housing structure of claim 8, further encloses and supports an excitation source comprising a spindle motor configured to rotate a data storage disc within the housing structure, wherein the spindle motor is mechanically coupled to the planar housing layer at a contact point, and wherein the multi-layer damping structure circumferentially extends about the contact point.

11. (withdrawn) The multi-layer housing structure of claim 8, wherein the planar housing layer comprises a planar recess substantially corresponding to the areal footprint of the multi-layer damping structure, and wherein the multi-layer damping structure is disposed within the planar recess so that the first visco-elastic damping layer contactingly adheres to the planar recess.

12. (withdrawn) The multi-layer housing structure of claim 8, wherein the first and second rigid damping layers are each formed of stainless steel.

13. (withdrawn) The multi-layer housing structure of claim 8, wherein the first and second visco-elastic damping layers are each formed of pressure sensitive adhesive.

14. (withdrawn) The multi-layer housing structure of claim 8, wherein the respective thicknesses of the first and second rigid damping layers are selected in accordance with a method comprising steps of:

determining a resonant frequency of the housing layer;

developing a plurality of hypothetical models for the housing structure each comprising first, second and third theoretical layers wherein at least one of said theoretical layers comprises multiple damping layers;

determining a loss factor profile for each said hypothetical model in relation to the resonant frequency; and

selecting the thickness of each of the first and second rigid damping layers in relation to the determined loss factor profiles.

15. (withdrawn) A multi-layer housing structure comprising:

a substantially planar housing layer; and

a plurality of rigid damping layers interposed with a plurality of visco-elastic damping layers in a laminate stack adjacent the planar housing layer, wherein a final characteristic of each of said rigid damping layers and said visco-elastic damping layers is determined by steps for determining a final characteristic of each of said rigid and visco-elastic damping layers.

16. (withdrawn) The multi-layer housing structure of claim 15, wherein the steps for determining a final characteristic of each of said rigid and visco-elastic damping layers comprising:

determining a resonant frequency of the planar housing layer;

developing a plurality of hypothetical models for the housing structure, each model comprising first, second and third theoretical layers wherein at least one of said theoretical layers comprises multiple damping layers;

determining a loss factor profile for each said hypothetical model in relation to the resonant frequency; and

selecting the final characteristic of each of said rigid damping layers and said visco-elastic damping layers in relation to the loss factor profiles from the determining step.